

Medical Educational Software Assessments

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INTRODUCTION

Many aspects of an educational computer program affect the success of the program. Accuracy, learning style, user experience, curriculum, pedagogical philosophy, learning objectives, format and instructor preferences are all factors in determining the success of a program in a given educational environment. Several questions have been raised regarding the effectiveness of the use of computers in medical education as well as methods to employ in evaluating their effectiveness¹. Several methods have been developed to systematically evaluate educational software and to communicate to others the usefulness of the program.

Currently reported software evaluation methods represent an approach to measure and describe the effectiveness of a software application. In this study we evaluate published reviews of medical educational software to determine if consistently applied methods of review exist. This study will address the availability of information pertaining to medical educational software assessment.

METHODS

Using the available literature, a database of medical educational software reviews was developed. Initial evaluation of 23 reviews was performed to determine the categories that should be included in the database. In this initial evaluation, one of the authors (LH) read the review, and identified key concepts that reviewers noted as indicators of quality for the specific software. This initial evaluation indicated the following concepts for inclusion in the database: 1) source of the review; 2) individuals conducting the review; 3) primary purpose and intended user 4) navigational method; 5) description of content; 6) completeness of content; 7) accuracy of content; 8) program mode or design; and 9) intended instructional model. The original reviews and 39 others were evaluated to develop a profile of each of the reviews. Software categories included in the database were medical education, continuing medical education and patient education.

RESULTS

A total of 62 reviews were analyzed from several sources. Physicians conducted a majority of the reviews (77%). The following table summarizes the concept data gained from these reviews.

Concept	Indicated	Implied	Unavailable
Navigation	31	20	11
Description	38	24	
Completeness	17	24	
Accuracy	12	20	
Program Design	42	20	
Ed. Model	19	17	26

CONCLUSION

Software reviews are often mutually inconsistent and lack concise information applicable to selecting appropriate software. Assessment methods and terminology were found to be inconsistent throughout the reviews. Those seeking pertinent information regarding medical educational software are forced to rely on subjective reports and interpretation to gain insight regarding the software.

This study clearly indicates that medical educators need to work toward a common terminology and methodology of reviewing and reporting the success of medical educational software programs. Both the terminology and methodology should be directed toward understanding of interface design, instructional design and user satisfaction. These factors will predict success of the software in meeting instructional goals.

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References

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